

AAMS (The Association of Air Medical Services): is an internationally recognized professional association for the providers and personnel of air medical services. AAMS supports and coordinates both educational and research activities relating to its membership and the air medical industry at large. It acts as a resource for the exchange of information among all interested parties and will provide consultation when appropriate. AAMS will represent its member's interests in activities that may affect the overall provision of air medical services.

Advanced Life Support Rescue Aircraft: As defined in California State Title 22 Pre-hospital EMS Air Regulations (§100282): "Advanced life support rescue aircraft" or "ALS rescue aircraft" means rescue aircraft whose medical flight crew has at a minimum one attendant certified or licensed in advanced life support

Air Ambulance: As defined in California State Title 22 Pre-hospital EMS Air Regulations (§100280): "Air ambulance" means any aircraft specially constructed, modified or equipped, and used for the primary purposes of responding to emergency calls and transporting critically ill or injured patients whose medical flight crew has at a minimum two (2) attendants certified or licensed in advanced life support.

Aircraft: A term used by the Federal Aviation Administration (FAA) to describe both an airplane and a helicopter

Air Medical: The phrase commonly accepted when referring to the activities relating to air ambulance airplanes, helicopters, their crews and administrative programs.

Air Medical Catchment Area: The area from which a hospital with a helicopter landing facility can expect to draw patients.

ALS (Advanced Life Support): The classification assigned to ambulances that indicate the highest level of medical care available in that vehicle. The ALS classification means the vehicle is staffed by paramedics who are capable of administering drugs, starting IVs, using heart monitors, defibrillation devices, and other interventions in medical care.

American College of Surgeons: The American College of Surgeons (ACS) was founded in 1913 on the basic principles of improving the care of the surgical patient and the education of surgeons. The ACS Committee on Trauma (ACS COT) is the oldest standing committee of the College. Established in 1922, this committee focuses on improving care of the injured patient, publishes its established guidelines for optimal resources for care of the injured patient, and provides a consultation program to verify that Trauma Centers and Trauma Systems meet the standards set by these guidelines.

Anatomic: Having to do with the body's form or structures, such as bones, glands, organs, etc.; anatomic triage criteria refer to specific body areas.

Backboard: A full length board, often made of plywood, used under the patient to provide a rigid surface in the event there are broken or miss-aligned bones; especially in the spinal cord or neck.

Basic Emergency Medical Service: The provision of emergency medical care in a specifically designated area of the hospital that is staffed and equipped at all times to provide prompt care for any patient presenting urgent medical problems (see Comprehensive Medical Service).

Basic Life Support Rescue Aircraft: As defined in California State Title 22 Pre-hospital EMS Air Regulations (§100283): “Basic life support rescue aircraft” or “BLS rescue aircraft” means a rescue aircraft whose medical flight crew has at a minimum one attendant certified as an EMT-1A, or an EMT-1-NA with at least eight (8) hours of hospital clinical training and whose field/clinical experience specified in §100074 (c) of Title 22, California Code of Regulations, is in the aeromedical transport of patients.

BLS (Basic Life Support): The lowest classification assigned to ambulances that are staffed by medical personnel trained in the basics of first aid and capable of administering CPR.

Blunt Trauma: A broad term referring to any mechanism of injury that occurs without actual penetration of the body. Blunt trauma typically results from motor vehicle accidents, falls, or assaults with a blunt object.

CAMTS (The Commission on Accreditation of Medical Transport Systems): The association is a continuation of the original CAAMS Commission that was renamed in 1997 to more correctly represent all the transportation vehicles, air and ground, utilized by Air Medical Programs.

Catchment Area: The geographic area surrounding a hospital from which its patients are drawn. (See also Air Medical Catchment Area).

CCT (Critical Care Transport): The highest level of en route care assigned to ambulances. CCT is the next step above ALS and provides the same level of care that might be expected in a critical care unit of a hospital.

COBRA (Congressional Budget Omnibus Reconciliation Act of 1986): (PL99-272). A federal act containing basic enroute care requirements for the emergency transport of patients.

Communications System: A collection if individual communication networks, transmission system relay stations, and control and base stations capable of interconnection and interoperation that are designed to form an integral whole. The individual components must serve a common purpose, be technically compatible, employ common procedures respond to control, and operate in unison.

Comprehensive Emergency Medical Service: The provision of diagnostic and therapeutic services for unforeseen physical and mental disorders which, if not promptly treated,

would lead to marked suffering, disability, or death. The scope of services is comprehensive, with in-house capabilities for managing all medical situations on a definitive and continuing basis.

CPR (Cardiopulmonary resuscitation): The external massage of the heart conducted in an attempt to regain the normal activity of that organ.

DALY: Disability-Adjusted Life-Year. A summary measure of health developed by the Global Burden of Disease study group that makes it possible to estimate the burden of major diseases, injuries, and risk factors. The DALY measures the gap between the actual health of a population and a hypothetical norm; namely, a life expectancy of 82.5 years for women and 80 years for men. DALYs are calculated as the sum of the years of life lost due to premature mortality in the population and the years of healthy life lost due to disability.

Designation: Formal recognition of hospitals as providers of specialized services to meet the needs of the severely injured patient; usually involves a contractual relationship and is based on adherence to standards.

Disaster: Any occurrence that causes damage, ecological destruction, loss of human lives, or deterioration of health services on a scale sufficient to warrant extraordinary response from outside the affected community area.

Dispatch: Coordination of emergency resources in response to a specific event.

Doppler: Any device that can be wired into the medical crewmembers headsets to allow them to monitor a patient's heart tones.

DOT (Department of Transportation): The parent federal organization of the Federal Aviation Agency (FAA).

DRG: (Diagnosis Related Groups): A system developed for reimbursement of Medicare and Medicaid patient care that is based on a comprehensive sum payment predetermined for any of dozens of diagnostic groups.

ECLS (Extracorporeal Life Support): A type of life support that uses an artificial heart-lung machine to oxygenate the blood in patients where more common methods of support have failed.

ECMO (Extracorporeal Membrane Oxygenation): A specific type of life support system that uses an artificial heart-lung machine to oxygenate the blood in patients where more common methods of support have failed. The term ECMO has been replaced in some recent clinical reports by the term ECLS.

EDAT (Emergency Department Approved for Trauma): A term used in Marin County to define a hospital's capabilities for treating trauma patients in this suburban/rural area. The California State EMS Authority approved this term for Marin County's Trauma Care System Plan prior to the American College of Surgeons Committee on Trauma recogni-

tion of the Level IV designation. The primary distinguishing capability for this designation is the availability of a trauma surgeon within 30 minutes of patient arrival. The designation is primarily designed in this County for surgical intervention/screening of patients who meet mechanism triage criteria.

Emergency (Emergent): A situation (emergency) or condition (emergent) in which a patient has a need for immediate health care attention due to significant risk of death or major damage. Emergency can be due to either trauma or medical causes.

EMS (Emergency Medical Services System): A system that provides for the arrangement of personnel, facilities, and equipment for the effective and coordinated delivery of health care services in appropriate geographical areas under emergency conditions

EMT (Emergency Medical Technician): An emergency medical care person with the most basic rating that serves in the emergency medical service system.

FAA (Federal Aviation Administration): The federal agency that governs the construction, maintenance, crewing, and piloting of all aircraft in the United States.

FAR (Federal Aviation Regulations): Those rules published by the Federal Aviation Agency that govern all pilots and the operation and maintenance of their aircraft.

FATO (Final Approach and Takeoff Area): A defined area over which the final phase of the approach to a hover, or a landing, is completed and from which the takeoff is initiated. This area was previously called the “takeoff and landing area.”

Fixed Wing: A common term used to describe airplanes. The term fixed wing is used for airplanes in contrast to helicopters whose wings rotate.

Flight Crew: A term defined by the Federal Aviation Administration describing the pilot, copilot, or other crewmembers required to operate the aircraft. Air medical programs often refer to their flight nurses, and other medical crew, as flight crews, but the FAA does not recognize these descriptors. This term, as used by the non-pilot personnel, has led to some confusion in the interpretation of FAA regulations.

Functional Recovery: A term used in trauma surgery literature to refer to the concept of full recovery after injury. It is an inclusive term, acknowledging that healing of a physical wound is one part of the complex process of recovering after injury. Other measures of functional recovery include return to mobility and activities of daily living, return to work, school, or other social roles, and restoration of psycho-emotional well being.

Helistop/Helipad: A landing spot for picking up and dropping off passengers (such as patients) and cargo (such as transplant organs). A “helistop” is a less intensive type of “heliport”, which is a more generic term that applies to all helicopter landing areas. A fully equipped heliport may include facilities for refueling, maintenance, permanent aircraft tiedowns, hangars, etc.

HEMS (Helicopter Emergency Medical Service): Specially equipped helicopters that are designated for care and transport of emergency medical and trauma patients.

HMO (Health Maintenance Organization): One of the most popular health care organizations designed specifically to assist in the reduction of care costs.

Hospital-based: A term commonly used to describe those aircraft operating as air ambulance vehicles attached to, or operated by, a hospital. The term hospital-based is commonly used to describe civilian type services in contrast to public service, military or other governmental aircraft.

ICU (Intensive Care Unit): Those units of a hospital that provide the highest level of care to patients requiring intensive critical care.

IFR (Instrument Flight Rules): The specific FAA Regulations that apply to aircraft when they are conducting flight without visual reference to the ground.

Inclusive Trauma Care System: A trauma care system that incorporates every health care facility in a community in a system in order to provide a continuum of services for all injured persons who require care in an acute care facility; in such a system, the injured patient's needs are matched to the appropriate hospital resources

Incubator: A portable compartment for neonatal transports. The incubator (isolette) provides a heated and protected environment for critical infant transportation.

Injury: The result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of such essentials as heat or oxygen.

Injury Control: The scientific approach to injury that includes analysis data acquisition, identification of problem injuries in high-risk groups, option analysis and implementing and evaluating countermeasures.

Injury Prevention: Efforts to forestall or prevent events that might result in injuries.

Injury Rate: A statistical measure describing the number of injuries expected to occur in a defined number of people (usually 100,000) within a defined period (usually 1-year). Used as an expression of the relative risk of different injuries or groups.

Interfacility Transfer: Transfer of patients between acute care hospitals.

Isolette: A portable compartment for neonatal transports. The isolette provides a heated and protected environment for critical infant transportation.

ISS (Injury Severity Score): A mathematical rating used to control for injury acuity.

IV: An abbreviation used to denote intravenous, which indicates drugs or other liquids that are directly injected into the body or bloodstream.

IV Warmers: A heated storage cabinet that is designed to keep IV fluids warm during flight.

IV Pump: A small pump that aids in the accurate infusion and administration of fluids.

Lead Agency: An organization that serves as the focal point for program development on the local, regional, or state level.

Level I, II, III, IV: Refers to the kinds of resources available in a trauma center, and the number of patients admitted yearly. These are categories that define national standards for trauma care in hospitals. They were developed, and continue to be recommended by the American College of Surgeons, and are used in California State Trauma Care Systems regulations. This glossary reference is provided as an overview for the reader of the San Francisco Trauma Plan. Not included in this glossary are the detailed codes provided by Title 22 Trauma Care Systems regulations.

A **Level I** trauma center has a full range of specialists and equipment available 24 hours a day, and admits a minimum required annual volume of severely injured patients. Additionally, a Level I center has a program of research, is a leader in trauma education and injury prevention and is a referral resource for communities in neighboring regions (community outreach).

A **Level II** trauma center in an urban region ideally works in collaboration with a Level I center. It provides comprehensive trauma care and supplements the clinical expertise of a Level I institution. It provides 24-hour availability of all essential specialties, personnel and equipment. Minimum volume requirements may depend on local conditions. These institutions are not required to have an ongoing program of research, or a surgical residency program.

A **Level III** trauma center does not have the full availability of specialists, but does have resources for the emergency resuscitation, surgery and intensive care of most trauma patients. A level III center has transfer agreements with level I and/or level II trauma centers that provide back-up resources for the care of exceptionally severe injuries.

A **Level IV** trauma center provides the stabilization and treatment of severely injured patients in remote areas where no alternative care is available.

Local EMSA: A “Local Emergency Medical Services Agency” as defined by California Title 22 regulations. The local EMSA in San Francisco is the Emergency Medical Services Section of the Department of Public Health.

Major Trauma: That subset of injuries that encompasses the patient with or at risk for the most severe or critical types of injury and therefore requires a systems approach in order to save life and limb.

MASH (Mobile Army Surgical Hospital): The first field hospitals used during the Korean conflict for the treatment of soldiers with battlefield wounds.

Mechanism of Injury: The source of forces that produce mechanical deformations and physiologic responses that cause an anatomic lesion or functional change in humans.

Medical: A term commonly used with a general meaning but used primarily in this report to denote an unhealthy condition due to a disease process or failure of a body system, such as bacterial or viral infection, stroke, heart attack, etc. Medical patients are distinct from trauma patients based on differences in the cause of being unhealthy.

Medical Control: Physician direction over pre-hospital activities to ensure efficient and proficient trauma triage, transportation, and care, as well as ongoing quality management.

Morbidity: The incidence of a specific disease or ailment in a given group.

Mortality: The incidence of death in a given group.

MRI (Magnetic resonance imagery): A medical device that scans internal parts of the body reading their magnetic signature.

Multiple-Casualty Incident: An emergency incident involving any number of injured people, which overloads the *immediately available* medical resources.

NAEMSP (The National Association of Emergency Medical Services Physicians): An organization of physicians and other professionals who provide leadership and foster excellence in out-of-hospital emergency medical services.

NHTSA (National Highway Traffic and Safety Administration): A sub-department of the Department of Transportation, which has published numerous reports on the subject of air ambulance, transport.

NEMSPA (National Emergency Medical Services Pilots Association): An association formed and supported by the pilots who fly air ambulance aircraft. The organization is spokesperson and forum for the exchange of ideas among the pilots and other air medical interest groups.

NFNA (National Flight Nurses Association): An association formed and supported by the nurses, paramedics, and EMTs who fly aboard air ambulance aircraft. The organization is spokesperson and forum for the exchange of ideas among the nurses, paramedics, EMTs and other air medical interest groups.

Non-Invasive and Invasive: A term applied to the method by which drugs or monitoring devices are connected to the patient. An invasive method would entail inserting a catheter into the bloodstream for instance, to measure the amount of oxygen saturation present. A non-invasive method would use an external monitor or device to measure the amount of oxygen, for instance, without entering the body.

Non-Trauma Center: A “non-trauma center” is a community hospital that cares for injured patients who:

- 1) Have relatively minor injuries that can be treated outside a specialty trauma facility (e.g., a single broken bone, or a single system injury that falls out of trauma triage criteria), or
- 2) Have been transferred or “repatriated” from a trauma center after stabilization, for treatment in the healthcare system that contracts with the primary insurance carrier.

A non-trauma center is not an officially designated trauma receiving hospital, yet California State Trauma System regulations [California Title 22, Div. 9, Chap. 7, § 100258 (c), (d)] mandate local EMSA evaluations of the Trauma System to ensure that trauma centers and other hospitals that treat trauma patients participate in the quality improvement process set forth in those regulations.

Nova Metrix: A pulse oximeter that provides non-invasive monitoring of oxygen saturation in the bloodstream.

Operations Specification (Ops Specs): Those rules required by the FAA Part 135 regulations that pertain to the specific operation of the helicopter, pilots, and maintenance crews concerning a specific program.

Overtriage: Directing patients to trauma centers when they do not need such specialized care. Overtriage occurs because of incorrect identification of patients as having severe injuries when retrospective analysis indicated minor injuries.

PART 135: An acronym commonly used to describe the specific part of the Federal Aviation Administration Federal Aviation Rules that governs air medical aircraft and flight.

Pediatric: Age-specific term referring to patients who are 17 years of age or younger; may also be inclusive of newborn infants.

Penetrating Trauma: A broad term referring to any mechanism of injury that causes a cut or piercing of skin. Penetrating injury typically results from gunshot or stab wounds.

PPO (Primary Physician Organization): The title assigned to the primary physician assigned to each patient that is a member of a health maintenance organization.

Practice Guidelines: Defined by the Institute of Medicine as “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.”

Primary Care Hospital: A hospital with the basic services necessary to be classified as a hospital. These hospitals might have an emergency room and limited intensive care facilities, but generally, a small staff of resident physicians. Primary hospitals usually do not have a cardiovascular unit, the capability for open-heart surgery, high-risk obstetrics, or neonatal care units.

Protocol: Standards for EMS practice in a variety of situations within the EMS system.

Pulse Oximeter: A device that monitors the saturation level of oxygen in the blood-stream non-invasively.

Quality Improvement: A method of evaluating and improving the process of patient care which emphasizes a multidisciplinary approach to problem solving, and focuses not on individuals, but systems of patient care which might be the cause of variations.

Quality Management: A broad term that encompasses both quality assurance and quality improvement, describing a program of evaluating the quality of care using a variety of methodologies and techniques.

Receiving Hospital: A general acute care hospital with an Emergency Department that has the capacity to treat emergency patients (EMS Section policy #8000, II, A).

Regionalization: The identification of available resources within a given geographic area, and coordination of services to meet the needs of a specified group of patients. Referring to the concept of sharing trauma care resources with neighboring jurisdictions. For example, San Francisco County's trauma center is also designated as the trauma center for injured persons in northern San Mateo County.

Rehabilitation: Services that seek to return a trauma patient to the fullest physical, psychological, social, vocational, and educational level of functioning of which he or she is capable, consistent with psychological or anatomical impairments and environmental limitations.

Rescue Aircraft: "Rescue aircraft" as defined in California State Title 22 Prehospital EMS Air Regulations (§100281) means an aircraft whose usual function is not pre-hospital emergency patient transport but which may be utilized, in compliance with local EMS policy, for pre-hospital emergency patient transport when use of an air or ground ambulance is inappropriate or unavailable. Rescue aircraft includes ALS rescue aircraft, BLS rescue aircraft and Auxiliary rescue aircraft.

Respirator: A device which respirates (breathes) for the patient automatically.

Response Time (Response Interval): The time lapse between when an emergency response unit is dispatched and when it arrives at the scene of the emergency.

Resuscitation Board: A rigid stretcher or spineboard used for patient transport to provide a better surface for cardiac compression or CPR.

Risk Factor: A characteristic that has been statistically demonstrated to be associated with (although not necessarily the direct cause of) a particular injury. Risk factors can be used for targeting preventive efforts at groups who may be particularly in danger of injury.

Scenes (Scene Response): A term commonly used in the air medical industry to describe a helicopter response, or landing, at the scene of an accident to recover an injured person.

Service Area (catchment area): The geographic area defined by the local EMS agency in its trauma care system plan as the area served by a designated trauma center.

Specialty Care Facility: An acute care facility that provides specialized services and specially trained personnel to care for a specific portion of the injured population, such as pediatric, burn injury, or spinal cord injury patients

Suction Devices: Devices that are used to keep the patient's airway passages clear of any fluids.

Surveillance: The ongoing and systematic collection, analysis, and interpretation of health data in the process of describing and monitoring a health event.

Tertiary Care Hospital: A hospital where one can expect to find every level of care necessary. Tertiary Care Hospitals have specialized cardiovascular units, can perform open-heart surgery, and handle high-risk obstetrics and neonatal patients. These hospitals have high-level trauma units and are staffed with many kinds of physicians in residence.

TLOF (Touchdown and Liftoff Area): A load bearing, generally paved area, normally centered in the FATO, on which the helicopter lands or takes off. The TLOF is frequently called a helipad or helideck.

Trauma Care System: An organized approach to treating patients with acute traumatic injuries; it provides dedicated (available 24 hours a day) personnel, facilities, and equipment for effective and coordinated trauma care in an appropriate geographical region.

Trauma Care Systems Planning & Development Act of 1990: The law that amended the Public Health Service Act to add Title XII – Trauma Programs. The purpose of the legislation was to assist state governments in developing, implementing, and improving regional systems of trauma care, fund research, and demonstration projects to improve rural EMS and trauma care. Congress did not appropriate continuing funding; in 1995, the Act was not re-authorized.

Trauma Center: A licensed general acute care area hospital that has been designated as a Level I, II, or III trauma center by the local EMS Agency in accordance with the California Code of Regulations, Title 22, Division 9, Chapter 7.

Trauma Team: The multidisciplinary group of professionals, who have been designated to collectively render care for trauma patients at a designated trauma center.

Traumatic Injury: A term derived from the Greek for "wound". The definition used in this document refers to any physical injury that requires (or would have required, pre-

cluding death) surgical specialists to consult, observe or perform surgery in order to optimize the recovery.

Triage: The process of sorting injured patients on the basis of the actual or perceived degree of injury and assigning them to the most effective and efficient regional care resources, in order to insure optimal care and the best chance of survival.

Triage Criteria (Field Triage Criteria): Measures or method of assessing the severity of a person's injury that is used for patient evaluation, especially in the pre-hospital setting, and that utilizes considerations of anatomic, physiologic, and/or mechanism of injury (etiologic) factors.

TRISS: A mathematic formula that incorporates physiologic (Trauma Score), anatomic (Injury Severity Score), age (55 years is the cutoff), and variables that predict mortality for a given patient or group of patients.

Uncompensated Care: Care for which no reimbursement is made.

Undertriage: Directing fewer patients to trauma centers than is warranted because of incorrect identification of patients as having minor injuries when retrospective analysis indicated severe injuries.

Ventilator: A device that ventilates the patient, or breathes for them automatically.

Verification: A program through the American College of Surgeons Committee on Trauma in which trauma care experienced on-site reviewers evaluate capability and performance of an institution.

VFR (Visual Flight Rules): The specific FAA Regulations that apply to aircraft when they are conducting flight with visual reference to the ground.